Subject Index

Abiogenic hydrocarbons, deformed rocks 674
acmite, clinopyroxene mixing 446ff.
actinolite 3, 44f.
adamellite 517, 664
adcumulates, komatiites 705
adcumulus textures, dunite 438
aegirine-augite 503
alabandite 150
albite 3, 223, 395, 477
Al diffusion, clinopyroxene 643f.
alkali basalt 25, 197ff., 219f., 231, 371, 503
alkali feldspar 503, 517
alkaline magmatism, Grenville Prov. 473ff.
alkali olivine basalt 580
alkali trachyte 503
allanite 278, 477
–, monazite association 602f.
alloys, Pt group elements 68, 77
Al partitioning, olivine/silicate liquid 243ff.
alteration, granites 177ff.
amesite 348f.
amphibole 30f., 67f., 90, 259, 277, 348ff., 462, 477, 503
amphiboles, Ar isotope ratios 693f.
–, granitoids 255ff.
amphibolite 2f.
amphibolite-granulite facies transition, Rogaland 276
analcite 503
anatexis, Tolfa lavas 409
andalusite 603, 620
Andean magmatism 412ff.
andesine 503
andesite 209f., 309f., 413f., 586, 650f.
ankaramite 197f.
ankaratrite 503
ankerite 45
anorthosite 275ff., 474
anthophyllite 348f., 717
antigorite 348f.
apatite 45, 278, 477, 492, 503, 586, 605
arc magmatism, Flores 585ff.
–, sources 369ff., 381ff.
arc-rifting 219f., 236
arc tholeiites 219f.
arc volcanism, Taupo Zone 650f.
Ar isotope diffusion, hornblende 691f.
Ar isotope geochronology, gneiss 87f.
arsenopyrite 68, 73
ash-flow tuffs 677ff.
assimilation 290ff., 408, 677, 686
Au, chromitites 68f.
augen gneiss, feldspar evolution 275
augite 199, 503

B, dumortierite 16f.
Ba, K-feldspar megacrysts 282
back-arc basin volcanoes 219ff.
back arc magmas, generation 106ff.
baddeleyite 477
Ba/La, Central American lavas 374
Ba-phlogopite, mantle xenoliths 462f.
barroisite 3
basaltic andesite 305f.
basaltic liquids, deep contamination 427f.
basalts 197f., 290f., 305ff., 343, 371f., 580f.
–, back arc basins, generation 106ff.
basanite 506, 580
benmoreite 506
berthierine 124
biotite 3, 166, 184, 259, 277, 324, 393, 404, 477, 491ff., 503, 517, 605, 664, 717
–, gneiss, geochronology 87f.
–, zoisite + quartz stability 401
biotite granite 178f.
blob model, oceanic mantle 381
bronzite 708
brucite 348f., 705
buchite 651
–, K-cordierite 162f.

Calcite 3, 45, 152, 324, 348f.
calorimetry, glasses 81f.
carbonatites 143ff.
cataclasis 662
cataclasite 664f.
chalcopyrite 45, 68, 73, 629f.
chemical analysis
–, Abitibi batholite, Ontario 263
–, alkalic basalt, Hawaii 199f.
–, alkaline plutonites, Grenville Prov. 476
–, amphiboles, chromite inclusions 67
–, –, granite 670
–, –, granitoids 269
–, ankaramite, Hawaii 201
–, basalts, Parana 292
–, biotite, dyke contact 90
–, –, granites 492, 670
–, –, metapelites 328
–, chlorite, granites 492, 670
–, clinopyroxenes, eclogites 640
–, –, Minister Isl. dike 58
–, cumulates, komatiites 707
–, dacites, Rainy Lake 314
–, dike, Minister Isl. 57
–, eclogites, Pyrenees 557
–, –, Tsäkkok 5
–, garnets, eclogite 553
–, –, Eifel xenoliths 27
–, –, metapelites, New Hampshire 328
–, glass, N. Fiji Basin basalts 110
–, gneisses, Godthabsfjord 717
–, granite, Schwarzwald 185
–, –, Siljan 668
–, granitoids, Ontario 264
–, granulite xenoliths, Ruapehu 654
–, gregoryite, Na-carbonatite 149
–, hawaiite, Hawaii 199f.
–, hornblende, dyke contact 90
–, impactite, Siljan 519
–, K-cordierite, Blaue Kuppe and Eifel 164
–, –, Bokaro Coalfield 169
–, K-feldspar megacrysts, augengneiss 286
–, komatiites, Karasjok 46
–, lavas, Central America 370
–, –, Fernando de Noronha 506
–, –, Nevados de Payachata 416
–, –, Tolfa Area 404
–, –, Trindade 508
–, mafic volcanic rocks, Newfoundland 222
–, magnetite, dike 58
–, millerite, chromite incl. 67
–, monticellite, Na-carbonatite 150
–, mugearite, Hawaii 200
–, muscovite, granite 492
–, –, metapelite 328
–, nyererelte, Na-carbonatite 148
–, olivine, chromite incl. 67
–, –, spinifex-textured rocks 709
–, ophiolites, Thetford Mines 436
–, orthopyroxene, chromite incl. 67
–, –, dike 58
–, pentlandite, chromite incl. 67
–, plagioclase, dyke contact 90
–, –, Eifel xenoliths 29
–, –, Minister Isl. dike 58
–, –, spinifex-textured rocks 710
–, Pt group minerals, chromitites 69
–, pyroxenes, eclogites 552
–, –, Eifel xenoliths 28
–, –, granitoids 269
–, –, megacrysts, Freychinede 539
–, –, spinifex-textured rocks 709
–, pyroxenite, Freychinede 539
–, rhyolites, Rainy Lake 314
–, spinels, Islas Orcadas and ophiolite 338, 342
–, tholeiite, Hawaii 199f.
–, –, Rainy Lake 306
–, volcanic rocks, Flores 588
–, xenolith minerals 653
chert 223
chlorite 3, 44f., 71, 188, 223, 324, 344, 347f., 491f., 606, 618f., 664, 705, 717
–, expandable 123ff.
chlorite/corrensite mixed layer 124ff.
chromite 45, 66ff., 437f.
chromitite 66f.
clinochlore 348f.
clinopyroxenes 27f., 57f., 199, 277, 348ff., 404, 437f., 462f., 477, 533f., 586, 651, 706
–, disorder 446ff.
–, eclogites 551ff.
–, –, exsolution 637ff.
clinozoisite 3
coesite 551
–, inclusion in diamonds 159
collision zone, arc-continent, magma source 585ff.
combeite 147
conglomerate 603
cooling rate, effect on pyroxene exsolution 533f.
cooperite 68, 75
cordierite 716f.
–, potassic 162ff.
corrensite 123ff.
corundum 18, 551
crossite 5
Cr-pargasite 462f.

Cr-spinels, hydrothermal alteration 337ff.
–, solid inclusions 66ff.
crustal assimilation, magma chamber 686f.
crustal contamination 296
–, Andean lavas 424f.
crustal development, Archean 255ff., 724f.
crustal extension 106f.
crystal accumulation, Hawaii lavas 205f.
crystal fractionation 508
–, Hawaii lavas 209f.
crystallization, Na-carbonatite 151f.
cubanite 562
cummingtonite 696, 717
cumulates, komatiites 704f.
–, ophiolites 436ff.

Dacite 290, 305f., 403f., 413f., 586, 650f.
daphnite 348f.
deformation 662f.
–, Archean volcanic rocks, Rainy Lake area 304f.
diabase 525f.
diamonds, eclogites, garnet incl. 156ff.
differentiation, Andean lavas 412f., 421
diffusion, ^{40}Ar in metamorphic hornblende 691ff.
–, eclogitic xenoliths 637ff.
–, isotope fronts 486f.
–, pyroxene exsolution 533f.
diffusion model, zoned garnet 454f.
dikes 55ff.
diorite 476f.
diopside 348f.
–, clinopyroxene mixing 446ff.
diopside-anorthite-forsterite glass 81f.
dispersion, isotope fronts 486f.
dolomite 348f.
dumortierite, synthesis and composit. variation 11ff.
–, water content 121d.
dunite 435f.
dyke, cooling history 544f.
dyke intrusion, gneiss, geochronology 87ff.

Eastonite 398
eclogites 1ff.
–, diffusion 637ff.
–, syngenetic diamonds/garnets 156f.
–, trace elements 550ff.
element mobility, metabasites 6f.
element partitioning, olivine/silicate liquid 243ff.
energy transfer, deformed rocks 662ff.
enstatite 348f.
enthalpies of solution, glasses 82f.
epidote 3, 477, 492, 664f., 706
erlichmanite 68
expansion coefficients, magma components 174f.
exsolution, amphiboles 696
–, influencing parameters 533
–, muscovite 499f.

Fairchildite 152
fayalite 348f.
feldspar evolution, augen gneiss 275ff.
fenitization 143f.
ferritchromite 66f., 337
ferro-dolomite 348f.
ferrosilite 348f.
ferro-talc 348f.
Fe-Zn mixing energetics, system Cu-Fe-Zn-S 562ff.
flamme, tuffs 677ff.
fluid inclusions, granitic quartz 191
fluid infiltration, metamorphism 617ff.
fluid-rock interaction, isotope exchange 486f.
fluorite 145, 492
flysch 435
forsterite 348f.
fractional crystallization 290ff.
–, Andean lavas 421f.
–, Hawaii lavas 198f.
–, Tolfa lavas 407f.
fractionation, lavas 580
fractionation density, definition 173
fractures, deformed rocks 672

Gabbro 256, 305f., 435
gabbronorite 256
galena 68, 73
garnet 3f., 27f., 89, 551f., 605, 618f., 717
–, exsolution in eclogitic pyroxene 637f.
–, inclusion in eclogitic diamonds 156f.
–, zoned, post-growth diffusion 454f.
garnet exsolution, websterite 536f.
garnet websterite, cooling kinetics 533ff.
gedrite 717
geobarometry, metapelites 623f.
geochronology, gneiss/dyke contacts 87ff.
geothermometry, dike formation 59
–, granites 190
–, metapelites 623f.
–, spinifex-textured rock 711f.
–, staurolite grade metamorphism 602f.
glass, back arc basin basalts 109f.
–, buchite, K-cordierite occurrence 165
–, enthalpies of mixing 81f.
–, Mn^{3+} and Sr^{2+} sites 359ff.
–, xenoliths 651
glaucophane 3f.
gneiss 1, 257ff., 663, 715ff.
goethite 495
granite 325, 517f., 663
–, Schwarzwald, hydrothermal alteration 177ff.
–, sheet silicates 491ff.
granitoids, amphibole-bearing, mantle-derivation 255ff.
granodiorite 256
granulite 534
–, xenoliths 650ff.
granulite facies xenoliths, Eifel 25ff.
graphite 605, 621
greenstone 347, 705
greenstone belt, Abitibi 98
–, Lapland 42f.
gregoryite 144f.
grospydite 553

Harzburgite 435ff., 462f., 534
hawaiite 197ff.
heazlewoodite 68, 73
hedenbergite 348f.
–, clinopyroxene mixing 446f.
hematite 664
hexagonal cordierite 162f.
high-cordierite 162f.
H-isotopes, granites 180ff.
H_2O activity, metamorphism 617ff.
hollingworthite 68, 76
hornblende 3, 87f., 256, 348f., 477, 517, 586, 664, 691
–, formation from spinel + cpx 344
hornblende diorite 256
hornblende tonalite 256
hornblendite 534
hornfels, xenoliths 651
hydrometamorphism, retrograde, granites 177ff.
hydrothermal alteration, granites 177ff.
hydrothermal convection, impact-related 516ff.

Ignimbrite 290, 417
ijolite 144
ilmenite 45, 175, 278, 327, 477, 621, 651, 664
impact crater 663
impactite 517f.
impact melts 517f.
impact structure, Siljan 516f.
inclusions, chrome-spinels 66ff.
–, garnets in diamonds 156f.
incompatible element data, Central American lavas 373f.
indialite 162
Ir, chromitites 68f.
irarsite 68, 76
IR spectra, dumortierite 23
island-arc volcanism 219ff.
–, Flores 585ff.
isograds, metapelites, N. Hampshire 326f.
isotope exchange, impactite 528
–, kinetics 486f.
isotope transport, rock infiltration 486f.
isotopic mineral composition, net-transfer reaction effects 322ff.

Jadeite 395
–, clinopyroxene mixing 446ff.

K, cordierites 162ff.
kersantite 256
K-feldspar 189, 277ff., 327, 477
kimberlite 156, 631
kinetics, diffusion in eclogitic clinopyroxenes 640ff.
–, exsolution in pyroxenes 533f.
komatiites, partial melting 704ff.
–, Ti-rich 42ff.
kyanite 393, 551, 620, 717

Labradorite 438
lamellae, garnet exsolution in cpx 638f.
–, pyroxene exsolution 536f.
lamellar intergrowths, pyroxenes/garnets 533f.
lamproite, diamond/garnet syngenesis 156f.
lamprophyre 305
Landau theory, omphacite solid solutions 446ff.
latite 677
laurite 68, 75

lava cones 413f.
lavas, Hawaii 197ff.
–, North Fiji Basin 109f.
–, source mixing 369ff.
La/Yb, Central American lavas 374
lengaite 153
leucite 587
leucite basanite 586
lherzolite 462f., 534ff., 631
liquidus equilibria, alkaline mafic lavas 569ff.
lizardite 705

Magma chamber, crustal evolution 677ff.
magma contamination 289ff.
magma densities 173f.
magma mixing, Andean lavas 412f., 421f.
–, Central American lavas 377f., 386f.
–, granitoids 270
–, Hawaii lavas 205f.
–, Tolfa lavas 409
magmatism, Central America, source 369ff.
magnesite 348f.
magnetite 45, 58, 175, 277, 436, 477, 503, 587, 664, 705
mantle, lithospheric 460f.
mantle derivation, granitoids 255ff.
mantle lavas 580
mantle source, island-arc volcanism 233f.
mantle xenocrysts, diamonds 156f.
mantle xenoliths, diffusion kinetics 637ff.
mass balance, biotite/chlorite 189
mass transfer, deformed rocks 662ff.
megacrysts, K-feldspar in augengneiss 280ff.
melilites, solid solutions 575f.
melt extraction models, lavas 376
melting, system K_2O-CaO-MgO-Al_2O_3-SiO_2-H_2O 393ff.
melts, heats of mixing 81f.
–, sediment incorporation 369f., 381f.
mesocumulates, komatiites 704
metabasalt, corrensite 125ff.
metamorphism, eclogite formation 1ff.
–, Hohe Tauern 393f.
–, ophiolite sequence 434f.
–, Rogaland gneiss 275ff.
metasomatism, mantle peridotite 381f., 462f., 467f.
mica-pyroxenite 476
micas, granites 491ff.
microcline 259, 276f., 477, 492, 664
millerite 67
mixed-layering, chlorites 124f.
Mn^{3+}, structural environment in glasses 359ff.
monazite 492
–, staurolite grade, U-Pb dating 602ff.
monticellite 150
monzodiorite 256, 305
monzonite 256, 325, 474f.
mugearite 197f.
muscovite 45, 192, 324, 393, 491ff., 605, 621, 672
mylonitization 662

Natrocarbonatite, petrogenesis 143ff.
Nb-rutile 551
Nd isotope data, Andean lavas 418
–, Central American lavas 373f.
–, fiamme 684
–, Flores volcanics 591
–, granulite xenoliths 657
Nd-Sr isotope data, mafic volcanic rocks 230
Nd isotopic data, mantle xenoliths 464f.
–, Mariana lavas 383
nepheline 503
nepheline basalt 503
nepheline syenite 473f.
nephelinite 147, 503
net-transfer reactions, effect on isotopic data 322ff.
Ni, partition between sulfide and olivine 630ff.
Ni-sulfides, xenoliths 629f.
nosean 503
nyerereite 144f.

Ocean basins 106f.
ocean island basalt suites 502ff.
O isotope data, fiamme 681
–, granites 179ff.
–, impactite 522f.
olivine 45, 67f., 109f., 199, 348f., 435, 438f., 462f., 503, 586, 704ff.
olivine melilitite 580
olivine/silicate liquid, Al partitioning 243ff.
olivine/sulfide equilibration 633
olivine tholeiite 580
omphacite 3
–, disorder, Landau theory 449f.
–, solid solution, component activities 446ff.
ophicarbonate rocks 356
ophiolite 219, 338f., 347
–, Appalachians 433ff.
–, chromite inclusions 66f.
orthoclase 276
orthocumulates, komatiites 704
orthopyroxene 29, 57f., 67f., 277, 348f., 435, 462f., 533f., 586, 651, 706f., 717
orthopyroxenite 435f.
Os, chromitites 68f.
osumilite 163
oxygen fugacity, dike crystallization 59

Pahoehoe lava, natrocarbonatite 144f.
paragonite 3
paralavas, K-cordierites 162f.
pargasite 3
partial melting, komatiites 51, 704ff.
–, mantle 255
–, subduction-contaminated mantle 219ff.
partition coefficients, olivine/silicate liquid 245ff.
Pb isotope data, Andean lavas 418
–, fiamme 681
Pd, chromitites 68f.
pentlandite 45, 67f., 629f.
peridotite 337
–, mantle xenoliths 460ff.
–, ophiolites 433f.
peristerite 492
perthite 278
perthite syenite 477
phase equilibria, system CaO-FeO-MgO-Al_2O_3-SiO_2-CO_2-H_2O 347ff.
phenocrysts, Hawaii lavas 199f.
–, natrocarbonatites 143ff.
phlogopite 393
phlogopite + zoisite + quartz stability 400f.
phonolite 503
pillow lavas 1ff., 221f.
–, greenstones 44
pirssonite 152
plagioclase 29f., 57f., 89, 109f., 147, 178, 199, 259, 280f., 324, 404, 437f., 463, 492, 517, 575, 586, 605, 651, 664, 710
platarsite 68, 76
plum-pudding model, arc magmas 381
porcellanite 651
postshield crystal fractionation, modelling Hawaii lavas 210f.
prehnite 672, 706
protoliths, eclogite 1ff.
pseudobrookite 183
pseudotachylite 517, 665
Pt, chromitites 68f.
Pt group minerals, chromite inclusions 68f.
PT-window, cogenetic garnet and diamond 156ff.
pumpellyite 672
pyrite 45, 68, 150, 583, 629f.
pyroxenes, exsolution 533ff.
pyroxenite 435, 533
pyrrhotite 150, 563, 629f.

Quartz 3, 18, 31, 89, 179, 259, 278, 324, 348f., 393, 492, 517, 605, 618f., 651, 664
–, planar elements 517
quartz-cordierite gneiss, Archean 715ff.
quartz diorite 256
quartzite 2, 620
quartz syenite 476

Raman spectroscopy, syngenetic diamond/garnet 156f.
Rb-Sr isotopic characterization, granite minerals 192
Rb-Sr isotopic data, fiamme 683
–, mantle xenoliths 464f.
–, Rogaland augengneiss 279
REE, Andean lavas 416
–, back arc basin basalt 116
–, dike 57
–, eclogite garnets 554
–, Eifel xenoliths 35f.
–, Fernando de Noronha lavas 509
–, granitoids 268
–, K-feldspar megacrysts 283
–, mafic volcanic rocks 223ff.
mantle eclogite 550ff.
–, metapelites 603f.
–, ophiolites 436ff.
–, pyroxenes from eclogites 554
–, Rainy Lake mafic rocks 310ff.
replacement, micas 491f.
rhyodacite 290f.
rhyolite 219, 290f., 403f., 413f., 650f., 677
ridge systems, N. Fiji Basin 107

rifting, Grenville Prov. 482
–, Red Sea Area 460
rodingite 356
Ru, chromitite 68f.
rutile 621

Sagvandites 356
sandstone 663
sanidine 163, 404, 551
sanidinite facies, K-cordierites 162f.
scapolite 30
seamounts 107, 503
–, Mariana Isl., lavas 383f.
sericite 664
serpentine 45, 71, 348f.
serpentinite, PGE pattern 73f.
serpentinization 68, 343f., 435f.
shale 223, 603
sheet silicates, granite 491ff.
shoshonitic syenite 477
siderite 348f.
silica undersaturation, ocean island basalts 502ff.
sillimanite 327, 605, 620, 716
smectite 123f., 672
sodalite 503
solid solution, chlorites, metapelites 622
–, cubanites, thermodynamics 562f.
–, garnets, metapelites 622
–, omphacites, comp. activities 446ff.
solution models, omphacites 447
sôvite 152
sperrylite 66, 77
sphalerite 563
sphene 223, 277, 503, 517, 664
Spider diagrams, mafic rocks, Rainy Lake 310f.
spilite 223
spinel 109f., 436, 462f.
–, hydrothermal alteration 337f.
spinel lherzolite 534f.
spinel peridotite 533
spinifex textures, komatiites 704f.
spreading ridges, Fiji Basin 107
Sr^{2+}, structural environment in glasses 359ff.
Sr isotope data, Andean lavas 418
–, Central American lavas 373f.
–, flamme 683
–, Flores volcanics 591
–, granulite xenoliths 657
–, Mariana lavas 383f.
–, Tolfa lavas 404
stacking disorder, chlorite 493
staurolite 325, 717
staurolite grade metamorphism, geothermometry 602ff.
stellerite 672
stichtite 705
stilbite 672
structural models, corrensite 134
subduction 1f., 106f., 219f., 586f.
–, magmatism timing 473f.
–, New Zealand 650
subsolidus cooling, pyroxenite, duration 545
subsolidus reactions, micas 491ff.
substitutions, cordierites 162f.
–, dumortierite 11
–, olivine at high pressures 252f.
swelling chlorite 123f.
syenite 258, 474f.
symplectite, pillow lavas 5
system, diopside-anorthite-forsterite, energetics of glasses 81ff.
–, Fe-Zn-Cu-S, solid solutions 562ff.
–, K_2O-CaO-MgO-Al_2O_3-SiO_2-H_2O melting and subsolidus reactions 393ff.

Talc 45, 124, 348f., 394, 717
tectonic control, volcanism 369f.
TEM, corrensite 129f.
tephras 371f.
thermal events, post-growth, influence on garnets 454f.
thermochronology, Ar diffusion 691f.
tholeiites 219, 231, 305
Ti, komatiites 49f.
titanite 477
tonalite 256f.
tonalite gneiss, dyke effects 105ff.
tourmaline 605
trace elements, Andean lavas 416
–, back arc basin basalts 113f.
–, Eifel xenoliths 33ff.
–, Fernando de Noronha lavas 506f.
–, Flores volcanics 588
–, granulite xenoliths 655
–, Hawaii lavas 199f.
–, komatiites 46ff.
–, mafic volcanic rocks 223ff.
–, mantle eclogites 550ff.
–, megacrysts in augengneiss 286
–, metapelites 613
–, Parana basalts 293
–, quartz-cordierite gneiss 719f.
–, Trindade lavas 506f.
trachydacite 403f.
trachyte 506
transform faults, N. Fiji Basin 107f.
tremolite 348f., 395, 705
tridymite 163
trona 143
Tschermak's talc 348f.
tuff 221
turbidite 222
twinning, hexagonal cordierite 163

Ultramafic cumulates, ophiolites 436ff.
ultramafic rocks, phase equilibria 347ff.
U-Pb dating, metamorphic monazite 602ff.
U-Pb isotope data, alkaline rocks, Grenville Prov. 478
upper mantle heterogeneity 381f.

Vermiculite 491
volcanism, alkalic, Hawaii 197ff.
–, Andes 412f.
–, Central America 369ff.

Water, dumortierite 12
websterite 533
wehrlite 435f., 462
Wild Bight Group volcanics, Newfoundland 219ff.
–, Nd-Sr isotope data 223f.
–, REE data 223f.
–, stratigraphic relationships 235
–, tectonic history 234f.
–, trace elements 223f.
wonesite 124

Xenoliths, eclogite 637f.
–, Eifel volcanics, K-cordierites occurrence 163
–, granulite 650f.
–, lower crustal 25ff.
–, mantle derived, Sr-Nd isotope systematics 460ff.
–, mantle eclogites, REE 550ff.
–, Ni-sulfides 629ff.
xenotime 492
X-ray diffraction, mixed-layer phyllosilicates 126

Zircon 278, 477, 605
zoisite 393
zonation, ash-flow tuffs 677ff.
–, metamorphic, Rogaland 276f.
zoning, eclogitic clinopyroxene 637f.
–, granulite facies minerals 31f.

List of locations

Abitibi Lake, Ontario 257
Agnew Mine, W-Australia 705
Ajoya, Nevados de Payachata 413
Al Birk, Saudi-Arabia 461
Albtal, Schwarzwald 178
Alps, Austria 70
Ameragdla, Godthabsfjord 716
Apoyo Volc., Nicaragua 370
Appalachians, Quebec 434
Argyle, Kimberley/W-Australia 156
Ascension Isl., Atlantic 503
As Shamah Field, Saudi-Arabia 461
Asuncion, Pacific 382

Badger Bay, Newfoundland 220
Bamble, Norway 276
Bärhalde, Schwarzwald 178
Batu Tara, Sunda Arc 586
Bellerberg, Eifel 163
Big Lewis Lake, Newfoundland 220
Blaue Kuppe, Hesse, Germany 162
Blauen, Schwarzwald 178
Bokaro, India 162
Bouvet Isl., Atlantic 503
Brenk, Eifel 26
Bühlertal, Schwarzwald 178

Calabougie, Grenville Prov. 474
Caquena, Nevados de Payachata 413
Cerite Area, Tuscany 406

Cerro Galan, Argentina 290
Cerro Negro Volc., Nicaragua 370
Chapleau, Ontario 88
Choquelimpi, Nevados de Payachata 413
Chucullo, Nevados de Payachata 413
Cuilapa Volc., Guatemala 371

Ebulobo, Flores 586
Eifel, Germany 26, 162
Elba, Italy 406
Engeln, Eifel 26

Feda, Rogaland 276
Fernando de Noranha, Atlantic 504
Fiji Basin 107
Flores, Sunda Arc 586
Forbach, Schwarzwald 178
Freychinede, Pyrenees 534

Gatineau Domain, Grenville Prov. 474
Glovers Harbour, Newfoundland 220
Godthabsfjord, W-Greenland 716
Gough Isl., Atlantic 503
Granada Volc., Nicaragua 370
Grassy Isl., Minnesota 304
Gravberg, Siljan 518, 663
Grenville Prov., Canada 474
Grizzly Peak Caldera, Colorado 678
Guam, Pacific 382
Guayacan Volc., Costa Rica 371

Håland, Rogaland 276
Haleakala, Maui, Hawaii 198
Hanebach, Eifel 26
Hochgrössen Massif, Austria 70
Holum, Rogaland 276
Honeymoon Well, W-Australia 705
Hsuehshan Range, Taiwan 125
Hunter Fracture Zone, N. Fiji Basin 107
Hutaymah, Saudi-Arabia 461

Ija Volc., Flores 586
Indian Cove, Newfoundland 220
Inerie Volc., Flores 586
Irazu Volc., Costa Rica 371

Jackfish Lake, Ontario 257
Java Trench, Sunda Arc 586
Jizan, Saudi-Arabia 461
Junghua, Taiwan 125

Kangarssuk, Godhabsfjord 716
Kapuscasing, Ontario 88, 257
Karasjok, N-Norway 43
Kedang Volc., Flores 586
Kempenich, Eifel 26
Kensington, Grenville Prov. 474
Kenya Rift 143
Kish, Saudi-Arabia 461
Klemmbach, Schwarzwald 178
Kod Ali, Red Sea 461
Kongsberg, Norway 276

Kraubath Massif, Austria 70

Lac des Iles, Ontario 256
Lac Rouge, Grenville Prov. 474
Lake Siljan, Sweden 663
Lake Taupo, New Zealand 650
Lakselv, Karasjok Area 43
Lauca Caldera, Nevados de Payachata 413
Lawler Peak, Arizona 491
Lewotobi Volc., Flores 586
Lewotolo Volv., Flores 586
Lexington Bath., Maine 604
Lherz, Pyrenees 534
Liland, Rogaland 276
Long Pond, Newfoundland 220
Loon Lake, Grenville Prov. 474
Loranger, Grenville Prov. 474
Lunayyir, Saudi-Arbia 461
Lyngdal, Rogaland 276

Malsburg, Schwarzwald 178
Mandal, Rogaland 276
Mandiri Volc., Flores 586
Manziate Area, Tuscany 406
Mariana Isl., Pacific 382
Mauna Kea, Hawaii 198
Minister Isl., New Brunswick 56
Monte Calvario, Manziate Area 406
Mont-Laurier, Grenville Prov. 474
Mooselookmeguntic Pluton, Maine 605
Muriah Volc., Java 586

Nanny Bay Lake, Newfoundland 220
Nevados de Payachata, Chile 413
New Bay, Newfoundland 220
New Brunswick, Canada 56
New Caledonia 107
Newfoundland, Canada 220
New Hampshire, USA 325
Norrbotten, Sweden 2
Notre Dame Bay, Newfoundland 220

Oberkirch, Schwarzwald 178
Oldoinyo Lengai, Tanzania 143
Oslo Graben, Norway 276

Pacaya Volc., Guatemala 370
Parana, Brazil 290
Parinacota, Chile 413
Passamaquoddy Bay, New Brunswick 56
Payachata Region, Chile 413
Pecos Baldy Area, New Mexico 620
Platanar Volc., Costa Rica 371
Plumbago Pluton, Maine 605
Pomerape, Chile 413

Quetico Subprov., Ontario 304
Quilangarssuit, Godthabsfjord 716

Rainy Lake, Ontario/Minnesota 304
Rangeley Quadrangle, Maine 604

Raumünzach, Schwarzwald 178
Redington Pluton, Maine 605
Rest Isl., Minnesota 304
Rideau Lake, Grenville Prov. 474
Rio Grande Rift Region, Colorado 678
Rogaland, Norway 276
Rokatenda, Flores 586
Rota, Pacific 382
Rotuma, N. Fiji Basin 107
Ruapehu, Taupo Volc. Zone, New Zealand 650
Rumford Quadrangle, Maine 604

Saint Helena, Atlantic 503
Saipan, Pacific 382
San Vincenzo, Tuscany 406
Sarek, Norrbotten 2
Sasso, Cerite Area 406
Sawatch Range, Colorado 678
Schlächtenhaus, Schwarzwald 178
Schluchsee, Schwarzwald 178
Schwarzwald, Germany 178
Seal Bay, Newfoundland 220
Sebago Bath., Maine 604
Seebach, Schwarzwald 178
Seve Nappes, Sweden 2
Siljan Ring, Sweden 518, 663
Sira, Rogaland 276
Sirdal, Rogaland 276
Sprollenhaus, Schwarzwald 178
St. Blasien, Schwarzwald 178
Sunda Arc, Indonesia 586
Superior Prov., Ontario 256

Telemark, Norway 276
Telico Volc., Nicaragua 370
Thetford Mines, Quebec 435
Tinian, Pacific 382
Tolfa, Tuscany 406
Tonstad, Rogaland 276
Triberg, Schwarzwald 178
Trindade, Atlantic 504
Tristan da Cunha, Atlantic 503
Trois Seigneurs Massif, Pyrenees 534
Tsäkkok, Norbotten 2
Tuscany, Italy 406
Twin Lakes, Newfoundland 220

Uwayrid, Saudi-Arabia 461

Vaimok, Norrbotten 2
Vanuatu Trench 107
Vest-Agder, Norway 276
Vitiaz Trench, N. Fiji Basin 107

Wabigoon Subprov., Ontario 304
Wai Sano, Flores 586
Westport, Grenville 474
Wiluna, W-Australia 705

Yavapai Co., Arizona 491

Zabargad, Red Sea 461